



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/637,527	11/29/2000	Paul A. Tervo	KLR: 1 016.062	7631

7590 11/13/2003  
Chernoff Vilhauer  
McClung & Stenzel LLP  
1600 ODS Tower  
601 S W Second Avenue  
Portland, OR 97204-3157

EXAMINER

DEB, ANJAN K

ART UNIT PAPER NUMBER

2858

DATE MAILED: 11/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/637,527

Applicant(s)

TERVO ET AL

Examiner

Anjan K Deb

Art Unit

2858

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 21 May 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 2-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-37 is/are rejected.
- 7) ☒ Claim(s) 1 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 October 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4/2/01  
5/14/1, 3/12/02, 10/8/02, 10/15/02, 2/11/03, 8/27/03
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the first, second, third, fourth, and fifth elongate conductors must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Fig. 18(A-D) are objected to because reference numerals 52, 72, 260, 240, 220 as described in the specification (see page 23, 2<sup>nd</sup> para) are required to be shown in these drawings.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

2. Claim 7 is objected to because of the following informalities: Claim 7 should depend from claim 2 instead of depending from cancelled claim 1. Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 2-37, are rejected under 35 U.S.C. 103(a) as being unpatentable over Garretson et al. (EP-0230, 348) in view of Anderson (US 3,839,672).

Re claims 2,10,15-16,26-27 Garretson et al. discloses (Fig. 1) a probing device 10 for probing an electrical device 53 (DUT)(Fig. 3) comprising a first support 3 (printed circuit board), membrane 1 in overlying relationship to first support 3, plurality of first elongate conductors 15 (Fig. 3) supported by membrane 1, plurality of contacts 17 supported by membrane 1, each contact 17 electrically connected to at least a respective one of first conductors 15, a second support 7 (clamp) suitable to support first support 3 thereon for probing electrical device, and second, third, fourth elongate conductors (printed circuit board conductors 29)(plurality of grounded conducting strips located adjacent to conductors: see Garretson et al., claim 4).

Garretson et al. did not expressly disclose interconnecting conductor.

Anderson (US 3,839,672) discloses interconnected ground conductors 11,33 used for shielding a signal conductor in cable 19 (Fig. 5).

At the time of the invention it would have been obvious for one of ordinary skill in the art to modify Garretson et al. by adding an interconnecting conductor for connecting two ground conductors disclosed by Anderson for improved shielding from noise due to electromagnetic coupling with adjacent signal conductors.

Re claims 3-4, 11-12, 17-18, 22-23, 28-29, 33-34 Garretson et al. discloses conductors are coplanar since conductor patterns are formed on one surface of flexible membrane (page 4 line 15-23).

Re claims 5,13,19, 24 Garretson et al. disclose conductors 15 which inherently provide test signals as required for testing a device (DUT).

Re claims 6,14,20,25,32,37 Garretson et al. discloses ground conductors which inherently provides a conducting path for guard signals (plurality of grounded conducting strips located adjacent to conductors: see Garretson et al., claim 4).

Re claims 7-9, 21 Garretson et al. discloses all of the claimed limitations as set forth above except an elongate conductor having surface area greater than surface area of another elongate conductor.

Anderson (US 3,839,672) discloses interconnected ground conductors 11,33 used for shielding a signal conductor in cable 19 wherein conductor 33 has surface area greater than surface area of another elongate conductor 11 (Fig. 5).

At the time of the invention it would have been obvious for one of ordinary skill in the art to modify Garretson et al. by adding a conductor (grounding strip) disclosed by Garretson et al. having surface area greater than surface area of an elongate signal conductor as disclosed by Anderson for providing improved shielding of the elongate signal conductor from noise due to electromagnetic coupling with adjacent signal conductors.

Re claims 30,35 Garretson et al. discloses conductors 15 which inherently provides force signals as required for testing a device (DUT).

Re claim 31,36 Garretson et al. discloses conductors 15 which inherently provides sense signals required for testing a device (DUT).

#### ***Pertinent Art***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Pasiecznik (US 5,313,157) discloses membrane probe for testing an electrical circuit chip comprising plurality of conductors (traces) 20,22, connected to pads 32 formed on membrane 16 and optional ground conductors (traces) on membrane (Fig. 1).

Greub et al. (US 4,912,399) discloses membrane probe (Fig. 1-2) for testing an integrated circuits in wafer form 10 comprising plurality of conductors 24 formed on membrane 12

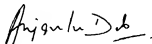
connected to plurality of contacts 30,34 for contacting contact pad of a device 10 under test.

Membrane has plurality of ground conductors 36 distributed across its surface and are interconnected (see claims 7-11 and Fig. 4).

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Anjan K. Deb whose telephone number is (703) 305-5219. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, N. Le, can be reached at (703)-308-0750.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone numbers are (703)-308-0956 and (703)-305-4900.



**Anjan K. Deb**

Patent Examiner

Art Unit: 2858

11/7/03

Tel: 703-305-5219

Fax : 703-746-4466

E-mail : [anjan.deb@uspto.gov](mailto:anjan.deb@uspto.gov)